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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Marco Ferrato

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7590

06/23/2009

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EXAMINER

PHAM, TIMOTHY X

ART UNIT

PAPER NUMBER

2617

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/580,555	<b>Applicant(s)</b> FERRATO ET AL.	
	<b>Examiner</b> TIMOTHY PHAM	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 22-42 is/are pending in the application.
- 4a) Of the above claim(s) 1-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's preliminary amendment to specification, drawing, and claims are acknowledged.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the methods steps as claimed in claims 22-31 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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3. The drawings are objected to under 37 CFR 1.83(a) because Figures 1 through 6 fail to show labels as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Regarding claim 1, the term “activating said user blocks in succession until said total number of users to be simulated is reached” is unclear. Specifically, it is not clear what is meant by the term “until total number of users to be simulated is reached” and the specification does not clarify this limitation. If number of users is reached, how one of ordinary skill knows the threshold is reached the maximum then it causes halting the simulation process?

***35 USC § 101***

7. Regarding claim 22, the body of method claim recites simulation steps. A simulation is computer instructions that must occur within a microprocessor (hardware) and thus the claim inherently includes hardware for performance of the claimed steps, therefore, it is a statutory subject matter. This claim falls within one of the four enumerated categories of patentable subject matter recited in 35 USC 101 (i.e. process, machine, manufacture, or composition of matter).

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 22-27, 30-40, and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Silva et al. (hereinafter “Silva”; US 2003/0086405, cited in IDS).

Regarding claims 22 and 36, Silva discloses a method and simulation equipment for evaluating the performance of a mobile telephone network, comprising the steps of:

simulating a first configuration of said mobile telephone network (Fig. 1, reference 102; paragraph [0037], e.g., CDMA network);

simulating a second configuration of said mobile telephone network (paragraph [0007], noted that the network planning tool supports multiple radio configurations, therefore, it is a second configuration of mobile telephone network);

said first and second configurations of said mobile telephone network being statistically independent of each other (paragraph [0007], e.g., the radio configuration is selected independently for forward link communications and reverse link communications);

each of said simulation steps comprising the steps of:

specifying a total number of users to be simulated (Fig. 3, reference 322; paragraph [0079]);

determining a sequence of activation of user blocks included in said total number of users to be simulated (Fig. 11, references 1102 and 1110; Fig. 16, reference 1602; paragraphs [0118], [0125], [0129], [0172], [0179], e.g., The total forward transmitted traffic channel power at a given sector should be computed as a sum of the total average power of each subscriber active for that sector);

activating said user blocks in succession until said total number of users to be simulated is reached, each user block indicating a traffic distribution (Fig. 13, references 1308 and 1310; Fig. 18A, reference 1810; paragraphs [0152], [0189], e.g., The CDMA planner checks for each subscriber at the corresponding active sector whether the forward call block threshold has been reached);

and processing at least one radio resource management event relating to the traffic distribution associated with each currently activated user block (Fig. 17; paragraphs [0042], [0048], [0191], e.g., The subscriber units are placed in randomly selected bins in the coverage area and may be distributed in accordance with the subscriber distribution information provided by the user of the CDMA planner (e.g., uniform or non-uniform distribution).

Regarding claim 23, Silva discloses the method of evaluating according to claim 22 above, comprising the step of:

repeating said steps of simulating said mobile telephone network until a predetermined accuracy threshold is reached for each simulated network value (Fig. 1; paragraphs [0043], [0048], [0059], [0118], notes the iterative analysis).

Regarding claim 24, Silva discloses the method of evaluating according to claim 22 above, wherein each activated user block comprises at least one user (paragraph [0201], e.g., an individual subscriber can close forward and reverse communication links with at least one sector in the simulated service area).

Regarding claim 25, Silva discloses the method of evaluating according to claim 22 above, wherein said step of processing at least one radio resource management event comprises the step of: executing at least one radio resource management algorithm (Fig. 2, reference 206; Fig. 3, reference 300; Fig. 20, references 2020 and 2024, noted that the admission control is one of radio resource management algorithm).

Regarding claim 26, Silva discloses the method of evaluating according to claim 25 above, wherein said radio resource management algorithm comprises an admission control algorithm (Fig. 2, reference 206; Fig. 3, reference 300; Fig. 20, references 2020 and 2024, noted that the admission control is one of radio resource management algorithm).

Regarding claim 27, Silva discloses the method of evaluating according to claim 26 above, comprising the steps of:

detecting that at least one admission control threshold has been exceeded for at least one of the users belonging to the currently activated user block (paragraphs [0077], [0105], [0122], [0151], [0181], e.g., Processing begins (step 1300) with the CDMA planner determining whether the full rate fundamental or supplemental forward traffic channel power calculated for the current subscriber exceeds the maximum forward transmit power for that channel type at all sectors in the active set and supplemental active set); and

taking said user out of service (paragraph [0074], e.g., If the subscriber unit is unable to support the reverse pilot channel and fundamental channel within the limits of



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its transmit power for any sector k, that subscriber unit is dropped from subsequent calculations).

Regarding claim 30, Silva discloses the method of evaluating according to claim 25 above, wherein said radio resource management algorithm comprises an outage control algorithm (paragraph [0074], e.g., that particular subscriber unit will not receive service from the sector k and this information is saved by the CDMA planner at step 310, therefore, it is an outage control).

Regarding claim 31, Silva discloses the method of evaluating according to claim 30 above, comprising the steps of:

detecting that at least one power threshold for the outage control has been exceeded for at least one of the users belonging to the currently activated user block (paragraphs [0077], [0105], [0122], [0151], [0181]); and

taking said user out of service (paragraph [0074]).

Regarding claim 37, Silva discloses the simulation equipment, according to claim 36 above, wherein said at least one object comprises data structures for supporting the processing of said at least one radio resource management event, said data structures comprising:

a list of activatable users (paragraph [0127]);

a list of active users (Fig. 11, references 1102 and 1110; Fig. 16, reference 1602; paragraphs [0118], [0125], [0129], [0172], [0179]; and

a group of lists of users out of service (paragraph [0074], e.g., not receive service from the sector K); and

a map of the system resources (paragraphs [0165], e.g., data structure that maps application type to the required number of channels).

Regarding claim 38, Silva discloses the simulation equipment, according to claim 37 above, wherein said map of the system resources comprises a plurality of structures, each representing a transceiver device belonging to said mobile telephone network (paragraphs [0039], [0165]), each structure comprising a reference to the corresponding transceiver device (paragraphs [0039], [0165], e.g., map table) and a list of cell context objects, one for each cell controlled by said transceiver device (paragraphs [0039], [0165]).

Regarding claim 39, Silva discloses the simulation equipment, according to claim 38 above, wherein each cell context object comprises groups of radio resource management parameters (Fig. 17; paragraphs [0042], [0048], [0191]).

Regarding claim 40, Silva discloses the simulation equipment, according to claim 38 above, according to claim 38, wherein said groups of parameters comprise at least one parameter selected from: a load threshold for admission control, a load threshold for congestion control, and a power threshold for outage control (Fig. 2, reference 206; Fig. 3, reference 300; Fig. 20, references 2020 and 2024, e.g., the admission control).

Claim 42 is drawn to a program for an electronic computer, loadable into the memory of at least one electronic computer and comprising code means for generating

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steps of claims 22-35. Therefore, the same rationale applied to claims 22-35 applies. In addition, Lee inherently discloses a computer program product, i.e., given that Silva discloses a process, the process would be implemented by a processor that requires a computer program product, e.g., a RAM, to function.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 28-29 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silva in view of Talpade et al. (hereinafter “Talpade”; US 2002/0145982).

Regarding claim 28, Silva discloses the method of evaluating according to claim 25 above, wherein said radio resource management algorithm (Fig. 2, reference 206; Fig. 3, reference 300; Fig. 20, references 2020 and 2024).

Silva fails to specifically disclose a congestion control algorithm.

However, Talpade discloses a congestion link control (paragraphs [0010], [0032]).

Therefore, taking the teachings of Silva in combination of Talpade as a whole, it would have been obvious to one having ordinary skill in the art at the time of the

invention by applicant to have a radio resource management algorithm is a congestion control algorithm in order to detect an overload condition of network.

Regarding claim 29, Silva in combination of Talpade discloses the method of evaluating according to claim 28 above, comprising the steps of:

detecting that at least one congestion control threshold has been exceeded for at least one of the users belonging to the currently activated user block (Silva: paragraphs [0077], [0105], [0122], [0151], [0181]); and

taking said user out of service (Silva: paragraph [0074]).

Regarding claim 41, Silva discloses the simulation equipment, according to claim 36 above, fails to specifically disclose comprising a simulation engine comprising an event scheduler module for specifying the sequence of operations performed by said simulation equipment.

However, Talpade discloses a simulation engine (Fig. 3, reference 160) comprising an event scheduler module for specifying the sequence of operations performed by said simulation equipment (Fig. 3, reference “Scheduling Mechanism”; paragraph [0033]).

Therefore, taking the teachings of Silva in combination of Talpade as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to a simulation engine comprising an event scheduler module for specifying the sequence of operations performed by simulation equipment for advantages of implementing simulation steps in communication network.

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*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY PHAM whose telephone number is (571)270-7115. The examiner can normally be reached on Monday-Friday; 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent P. Harper can be reached on 571-272-7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Timothy Pham/  
Examiner, Art Unit 2617

/VINCENT P. HARPER/  
Supervisory Patent Examiner, Art Unit  
2617